



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0100; Project Identifier MCAI-2020-00309-E; Amendment 39-21613; AD 2021-13-08]

RIN 2120-AA64

Airworthiness Directives; Safran Helicopter Engines, S.A. (Type Certificate Previously Held by Turbomeca, S.A.) Turboshaft Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Safran Helicopter Engines, S.A. Arriel 2C and Arriel 2S1 model turboshaft engines. This AD was prompted by reports of error messages on the full authority digital engine control (FADEC) B digital engine control unit (DECU), caused by blistering of the varnish on the DECU circuit board. This AD requires the replacement of certain FADEC B DECU's. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Safran Helicopter Engines, S.A., Avenue du 1er Mai, 40220 Tarnos, France; phone: +33 (0) 5 59 74 40 00. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0100.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0100; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7134; fax: (781) 238-7199; email: wego.wang@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Safran Helicopter Engines, S.A. Arriel 2C and Arriel 2S1 model turboshaft engines. The NPRM published in the *Federal Register* on February 26, 2021 (86 FR 11662). The NPRM was prompted by reports of error messages on the FADEC B DECU, caused by blistering of the varnish on the DECU circuit board. In the NPRM, the FAA proposed to require the replacement of certain FADEC B DECUs. The FAA is issuing this AD to address the unsafe condition on these products.

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2020-0046, dated March 4, 2020 (referred to after this as “the MCAI”), to address the unsafe condition on these products. The MCAI states:

Occurrences have been reported of FADEC B DECU error messages, which were found to be caused by blistering of the varnish on the DECU circuit board. Subsequent investigation determined that the use of a non-compliant primer is related to the

blistering effect which, in wet conditions, can cause malfunction of the stepper motor.

This condition, if not corrected, could lead to loss of automatic control on both engines concurrently, possibly resulting in reduced control of the helicopter.

To address this potentially unsafe condition, SAFRAN issued the MSB, as defined in this [EASA] AD, to provide instructions for identification and replacement of affected parts.

For the reason described above, this [EASA] AD requires replacement of affected parts with serviceable parts. This [EASA] AD also prohibits (re-) installation of affected parts.

You may obtain further information by examining the MCAI in the AD docket on at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0100.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

Related Service Information under 1 CFR Part 51

The FAA reviewed Safran Helicopter Engines Note Technique AA187866, Version A, dated 18 Octobre 2019 [October 18, 2019]. This service information identifies the serial numbers (S/Ns) of certain FADEC B DECUs installed on Arriel 2C and Arriel 2S1 model turboshaft engines. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Other Related Service Information

The FAA reviewed Safran Helicopter Engines Mandatory Service Bulletin (MSB) No. 292 73 2872, Version A, dated October 17, 2019. This MSB describes procedures for identifying the S/Ns of certain FADEC B DECU's and replacing certain FADEC B DECU's on Arriel 2C and Arriel 2S1 model turboshaft engines.

Costs of Compliance

The FAA estimates that this AD affects 148 engines installed on helicopters of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Replace the FADEC B DECU	1 work-hour x \$85 per hour = \$85	\$0	\$85	\$12,580

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-13-08 Safran Helicopter Engines, S.A. (Type Certificate Previously Held by Turbomeca, S.A.): Amendment 39-21613; Docket No. FAA-2021-0100; Project Identifier MCAI-2020-00309-E.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Safran Helicopter Engines, S.A. (Type Certificate previously held by Turbomeca, S.A.) Arriel 2C and Arriel 2S1 model turboshaft engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7321, Fuel Control/Turbine Engines.

(e) Unsafe Condition

This AD was prompted by reports of error messages of the full authority digital engine control (FADEC) B digital engine control unit (DECU), caused by blistering of the varnish on the DECU circuit board. The FAA is issuing this AD to prevent failure of the FADEC B DECU. The unsafe condition, if not addressed, could result in loss of engine thrust control and reduced control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

For affected engines having an installed FADEC B DECU with a serial number (S/N) identified in Safran Helicopter Engines Note Technique AA187866, Version A, dated 18 Octobre 2019 [October 18, 2019] (the Note Technique), within 1,400 engine operating hours after the effective date of this AD, replace the FADEC B DECU with a part eligible for installation.

(h) Installation Prohibition

After the effective date of this AD, do not install onto any engine a FADEC B DECU having an S/N listed in the Note Technique.

(i) Definition

For the purpose of this AD, a part eligible for installation is a FADEC B DECU that does not have an S/N listed in the Note Technique.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ECO Branch, send it to the attention of the person identified in Related Information. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

(1) For more information about this AD, contact Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7134; fax: (781) 238-7199; email: wego.wang@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2020-0046, dated March 4, 2020, for more information. You may examine the EASA AD in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0100.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Safran Helicopter Engines Note Technique AA187866, Version A, dated 18 Octobre 2019 [October 18, 2019].

(ii) [Reserved]

(3) For Safran Helicopter Engines, S.A. service information identified in this AD, contact Safran Helicopter Engines, S.A., Avenue du 1er Mai, 40220 Tarnos, France; phone: +33 (0) 5 59 74 40 00.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to:

<https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on July 9, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-15041 Filed: 7/14/2021 8:45 am; Publication Date: 7/15/2021]